Integrating Safety Into All of Work at Los Alamos National Laboratory Through Worker Engagement Utilizing the Worker Safety and Security Teams (WSSTs)



Marilyn Peabody 8/27/2009

• Los Alamos
NATIONAL LABORATORY



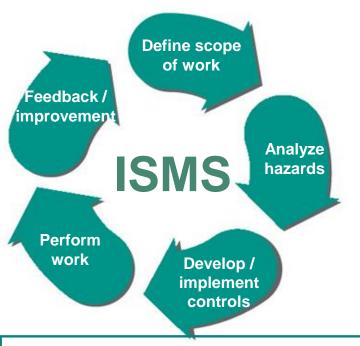
Personal Biography – Marilyn C. Peabody, MS Los Alamos National Laboratory, Safety Program Lead

- Invested 20 years educating youngsters in the biological and physical sciences earning Teacher of the Year in1997/98
- Have worked at Los Alamos National Laboratory for over 11 years
- Worked as Sr. Training Specialist specializing in Radiation Protection and Nuclear Safety Training for six years
- Was appointed to the Worker Safety Committee in 2002 and became the Safety Program Coordinator 2004
- Became the Safety Program Lead for Stockpile Manufacturing and Support Directorate in 2007
- Was voted in by my peers as the 2009 Institutional Worker Safety And Security Team (WSST) Chair working towards being a DOE VPP STAR Site
- Hold a Masters in Organizational Management from the University of Phoenix; Bachelors of Science in the Sciences (Biology, Physics and Chemistry) from the University of New Mexico; OSHA Certified





VPP & Integrated Safety Management Systems



ISMS is LANL's Safety Program

ISMS 8 Guiding Principles

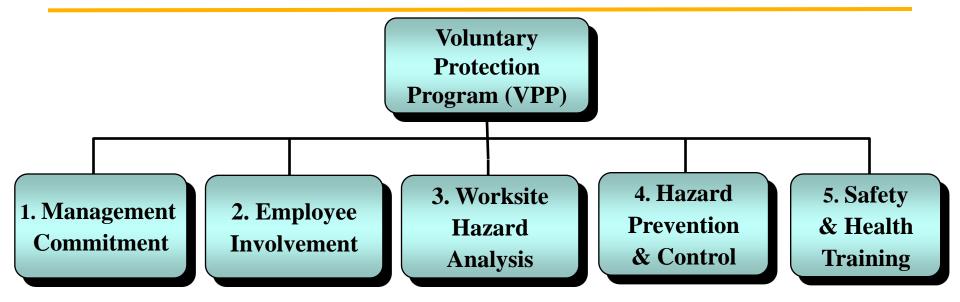
- Worker involvement
- Line management responsibility
- Clear roles / responsibilities
- Competence with responsibility
- Balanced priorities
- Identify safety standards and requirements
- Hazard controls tailored to work
- Operations authorization

VPP strengthens ISMS by emphasizing *Employee Involvement* and *Management Leadership*.



Slide 2

Five VPP Elements



- 1. Management Leadership is required
 - motivating force and resources
 - lead by example and involvement, not by directive
 - safety priority, direction, expectations and accountability are clear
- 2. Worker-driven Safety is the key
 - you understand our safety issues
 - you know effective solutions for these issues
 - worker/management interactions are increased



Slide 3

Worker Safety and Security Teams (WSSTs)

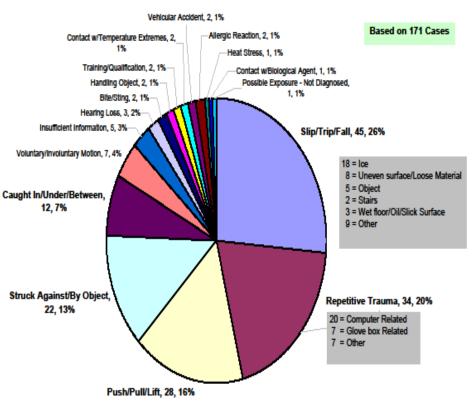
- Institutional Team
 - Primary and Alternate members from all 16 Associate Directorates
 - sub-contractors involved
 - Co-Sponsored by ESH&Q & Security ADs
 - Championed by the Director
- 16 Associate Directorate Teams
- 67 Division Teams
- Each group has at least one representative on a WSST







FY08
LANL Combined Recordable Cases by Source



As of 10/8/08

Highest categories:

- ➤ Slips, Trips and Falls
- ➤ Repetitive Trauma/Ergo







Addressing Slips, Trips, and Falls







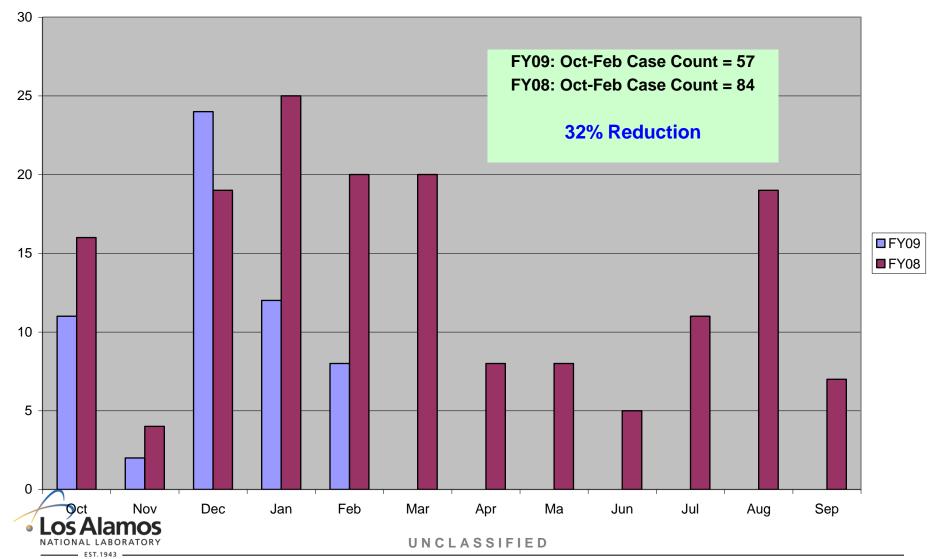
Signs to encourage workers to use de-icer

Distributed > 6000 snow/ice cleats to workers

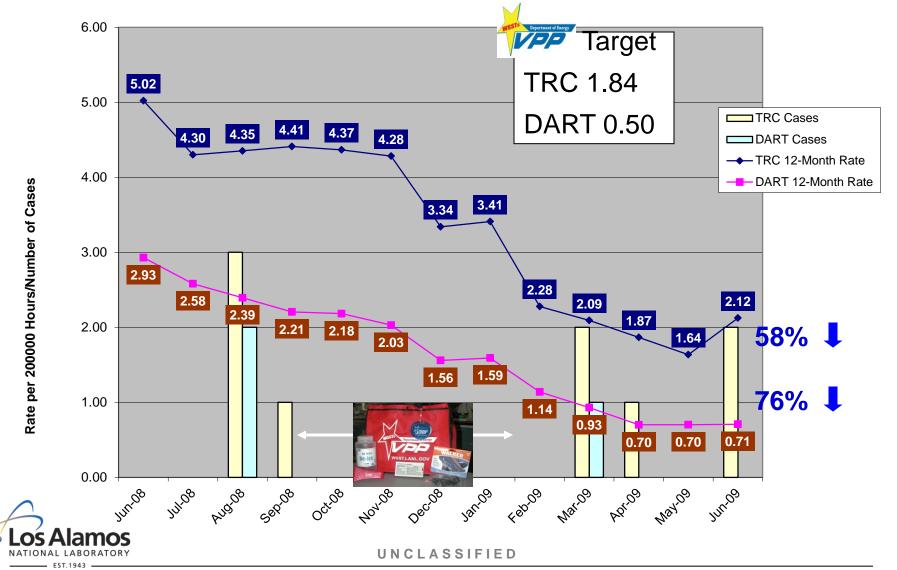
Winter Campaign Bags, tags, deicer labels and safety emergency information

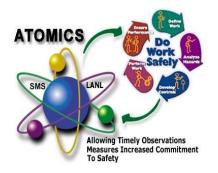


LANL Combined
Slips-Trips-Falls
FY09 vs FY08 thru Feb 09



ADSMS Injury Free Career





ATOMICS

ATOMICS is a safety observation process that will

- Reinforce safe behaviors,
- Identify/eliminate at-risk behaviors/conditions
- Is owned by the employees
- Managed the managers and supervisors

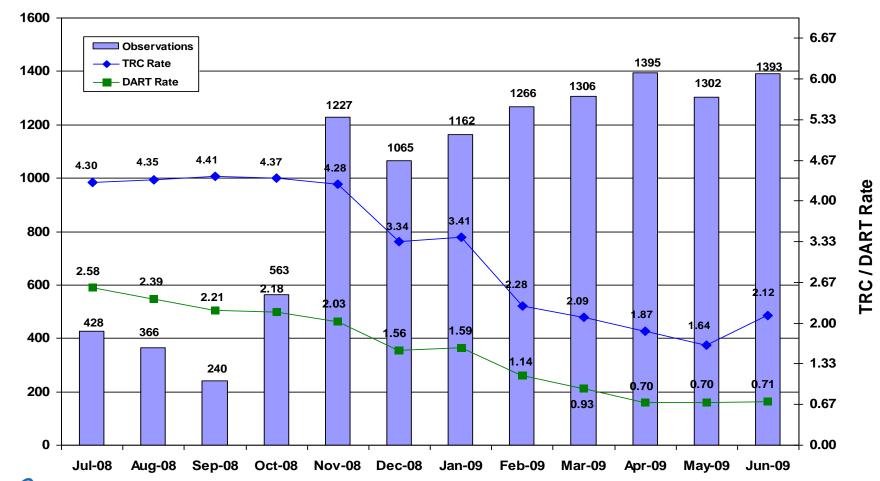
Promoting and providing positive reinforcement

of individual safe behaviors





ADSMS TRC/DART Rates & ATOMICS Observation Relationship





Observation Count



Safety Conversation – Most Important Part of Safety Observation



Observation Cards

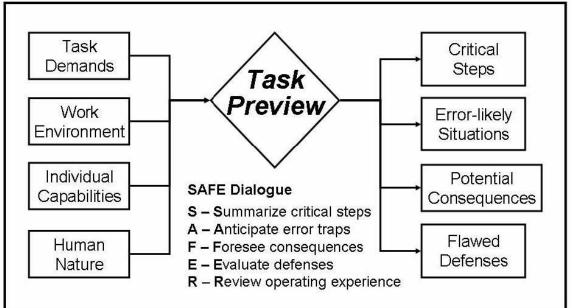
Facility Conditions Glovebox Work **Observations Detonator Facility** Good Catch Office Work **Outdoor Activities** PC Shop Fabrication Standards and Calibration Radiation Protection – Self Monitoring **Cold Lab Activities** Receiving lifting Loading **Vehicle Operator**



Pre-Job - HPI "SAFER" Dialogue

III Task Preview





Human Performance Fundamentals

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The following **SAFER** structure aids workers in:

- ✓ Anticipating
- ✓ Preventing
- √ Catching
- ✓ Recovering from error during a task

Process: Prepare Chemistry Samples/Waistband			
Pre-Operational Checklist			
Activity	Completed by	Completion Date	
Verify glovebox operating parameters.			
O2 Gloves Windows			
Check interior of glovebox for cleanliness. Clean if needed.			
Verify operator training and qualifications in accordance with training plan 5700.			
Verify M&TE is in calibration and is in proper			
operating condition.			
Verify tools and fixtures are present and in operating condition. Verify Traveler is signed off.			
Verify the current WI and data forms are presents.			
This checklist is a guide provided to assist the PIC in conductivity authorized and approved. Work is scheduled on POD.	ung pre-jou ortejs.		
Copy of work instruction/DOP/ or IWD for the job availa	able		
Conducted review of all task/steps and or phases or the w	ork activity		
Asked work team "how can we make a mistake at this po	int?"		
Ask work team "what is the worst thing that can go wron	g?"		
Discussed with work team who can stop work?			
Discussed response to alarms or emergencies?			
Verified that all members of work team have necessary e	quipment, material	s, and PPE?	
Discussed with work team what a successful outcome will	be for this work ac	ctivity?	
All work team members agreed to tasks/steps, hazards, a follow them. \\ \\	nd controls, and co	mmitted to	
RLM, PIC and workers signed Pre-Job Briefing?			
Other (specify)			

I Error Precursors influencing Job Context and Behaviors		
sk Demands	Individual Capabilities	
Γime pressure (In a hurry)	17. Unfamiliarity with task (1 st time)	
High Workload (memory requirements)	18. Lack of knowledge (mental model)	
Simultaneous, multiple tasks	19. New technique not used before	
Repetitive actions, monotonous	20. Imprecise communication habits	
rrecoverable acts	21. Lack of proficiency / inexperience	
interpretation requirements	22. Indistinct problem-solving skills	
Unclear goals, roles & responsibilities	23. "Hazardous" attitude for critical task	
Lack of or unclear standards	24. Illness / Fatigue	
ork Environments	Human Nature	
Distractions / Interruptions	25. Stress (limits attention)	
Changes / Departures from routine	26. Habit patterns	
Confusing displays or controls	27. Assumptions (inaccurate mental picture)	
Workarounds / Out-of-Service instruments	28. Complacency / Overconfidence	
Hidden system response	29. Mindset ("tuned" to see)	
Unexpected equipment conditions	30. Inaccurate risk perception (Pollyanna)	
Lack of alternative indication	31. Mental shortcuts (biases)	
Personality conflicts	32. Limited short-term memory	
	Indeterminable	
	33. Error precursors are indeterminable	
FINAL CHECK & REVIEW	BEFORE CONDUCTED WORK ACTIVITY	
Summarize critical steps: Anticipate error-likely situations:		
Foresee consequences: Evaluate controls:		

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Review operating experience:





Safety Communication

- FLM Monday morning Safety Stand-ups
- News Room Monitors
- ADSMS Email News
- Porcelain News
- SMS Broadcast of Observations Newsletter
- Plan of the Day / Morning Standup Meeting
- Operations Center



Anonymous Avenue for communicating concern

- No Surprises Program

Top 5 Continuous Improvement Projects
Using Lean Six Sigma

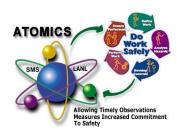
Boards/Committees:

Operations Board
First Line Manager Board
Radiation Protection Board
Training Board
Glovebox Glove Improvement Committee
Data Analysis Safety Team Management
Review Board
FLMs Gone Wild- Walk Downs





Focus for the Future



Work our Safety Improvement Plans (SIP)

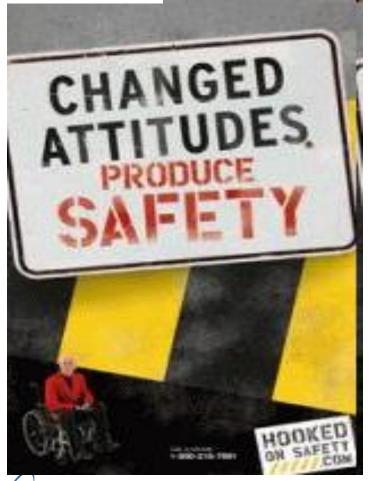
- ATOMICS Observations Peer to Peer Conversations
- Ergo Injury Prevention in Gloveboxes and Administrative Work
- Slip, Trip and Falls Preventions Fall and Winter Campaign
- Prevention of Glovebox Glove Failures and Breaches
- Struck by and Against Prevention- Keep up your Housekeeping
- Rad Protection Practice ALARA







Think Safety! Live Safely!



Key to success is Worker Involvement & willingness to change their attitudes towards safety, security & environment!

